



433 Teams  
**ENT**

9

# Nose II

Color index:

432 Team – **Important** – 433 Notes – Not important

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## Objectives:

- Acute & chronic rhinitis
- Allergic & non-allergic rhinitis
- Vestibular & furunculosis
- Nasal polyps (allergic & antrochoanal) etc
- Radiology illustration (e.g. CT scan)

# Rhinitis\*

\*Sometimes the disease is called "Rhinosinusitis" because usually sinusitis will accompany rhinitis attacks.

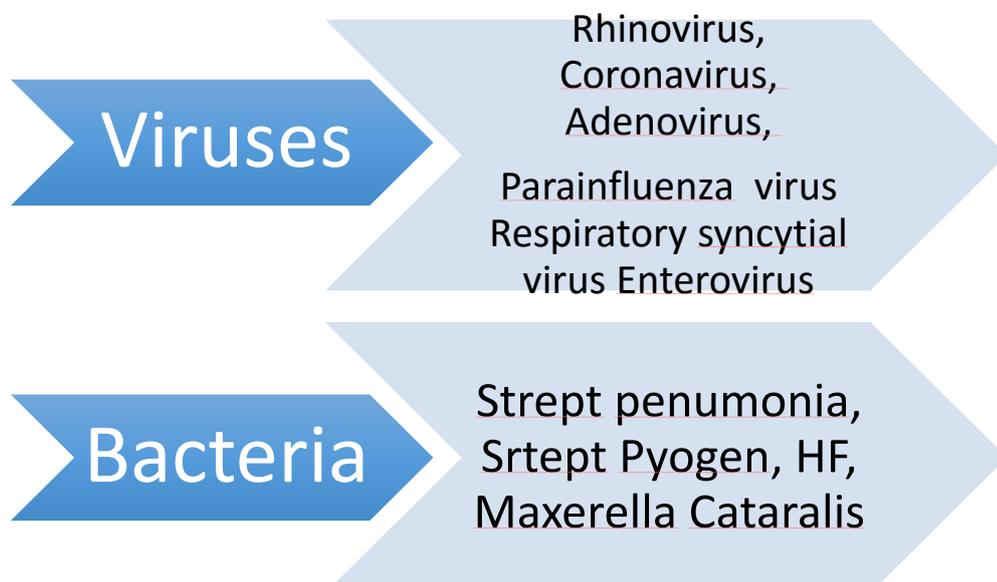
- **Definition:** Inflammation of the mucosa of the nasal fossae.
- **Types:** I. Acute rhinitis
  - II. Chronic rhinitis
- **Types based on etiology:**
  - (1) Infectious rhinitis
  - (2) Vasomotor rhinitis
  - (3) Occupational rhinitis
  - (4) Hormonal rhinitis
  - (5) Drug-induced rhinitis
  - (6) Gustatory rhinitis
  - (7) Nonallergic rhinitis with eosinophilia syndrome (NARES)

## Acute rhinitis

### ➤ Common cold & influenza & Para Influenza viruses:

"influenza & Para Influenza viruses are more severe than common cold"

### ➤ Etiology:





## ➤ Treatment:

- ✓ **Prophylactic:** Avoid contact with patient
- ✓ **Therapeutic**
  - Rest
  - Analgesics
  - Decongestants
  - Antibiotics “rarely given because in 95% of the cases it is viral”

# Chronic rhinitis

## Classification:

### - Specific:

- 1) Syphilis
- 2) Wegner's granuloma
- 3) Medline lethal granuloma
- 4) Sarcoidosis
- 5) Mycobacteria
- 5) Atrophic rhinitis

### - Non-specific:

- 1- Simple chronic rhinitis
- 2- Hypertrophic rhinitis
- 3- Atrophic rhinitis

## ➤ Non-specific chronic rhinitis:

### 1) Simple chronic rhinitis:

#### ■ Etiology:

- ✓ Neighboring infections e.g. chronic tonsillitis. “GERD can cause it as well”
- ✓ Adenoids “obstructing normal mucosal secretions => stagnation and good environment for bacteria to grow.
- ✓ Vasomotor rhinitis “happen as a result of autonomic disturbance”
- ✓ Chronic irritation e.g. dust, smoker
- ✓ Swelling of inferior turbinate

## ▪ **Treatment:**

- ✓ Correction of any predisposing factors.

## 2) Hypertrophic rhinitis:

- Etiology: Permanent hypertrophic changes **due to advanced stage of simple chronic rhinitis**

## 3) Rhinitis medicamentosa:

- **Etiology:** Induced by sympathomimetic nasal decongestant drops” like atropine“
- If we need to use sympathomimetic nasal decongestant drops then it must be **not more than 5days**”
- Q: What if you need to use decongestant for more than 5days?
- Answer: **We have to give systemic sympathomimetic decongestants like pseudoephedrine “No rebound effect”**
- **Clinical features:** Like simple chronic rhinitis
- **Treatment:** Like simple chronic rhinitis + Reduction of inferior turbinate

## 4) Atrophic rhinitis:

- **Other names:** Dry rhinitis, Rhinitis sicca. Open-nose syndrome, Ozena.
- **Definition:** Chronic inflammation of nasal mucosa with atrophy of various nasal constituents.
- **Etiology:** “Not fully known”
  - Infection
  - Endocrine or vitamin disturbances
- **Triad of atrophic rhinitis, namely**
  - Fetor
  - Crusting
  - Atrophy of the nasal structures

- **Types:**

- A) **Primary:**

- **Clinical features:**

- Foul stench
  - Epistaxis
  - Sensation of obstruction

- **Pathology:**

- 1) Degeneration of epithelium glands: leading to

- Thick crust in the nose - infected
    - Foul smell

- 2) Atrophy of the bony turbinates

- **Treatment:**

- Removal of the crusts
  - Glucose 25% in glycerine drops “to moisten the mucosa”
  - Local or systemic antibiotics
  - Surgical measures

- B) **Secondary: to :**

- Severe DNS “deviated nasal septum”
  - Syphilis
  - Lupus
  - Excessive operative procedures

# Allergic rhinitis

Allergy is an abnormal reaction of the tissues to certain substances.

- **Types: “old classification”**

- 1) Seasonal
- 2) Non-seasonal (perennial)

- **WHO Classification:**

- 1) Mild
- 2) Moderate
- 3) Sever

- **Clinical features:**

- Nasal obstruction
- Rhinorrhea
- Sneezing
- Nasal irritation

- **Diagnosis:**

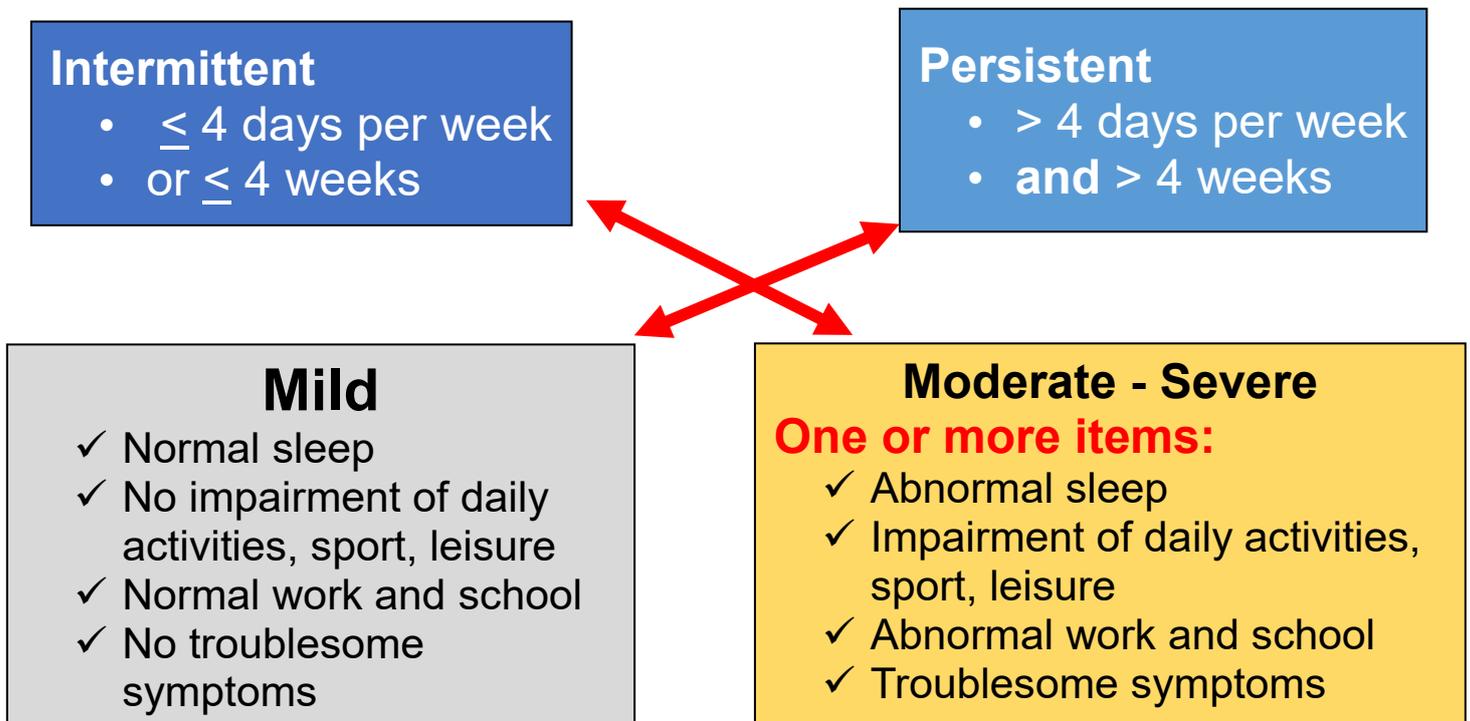
- History “when I get exposed to dust I have the symptoms”
- Eosinophilis
- Skin tests
- Blood tests “e.g. radioallergosorbent test (RAST) to assess total Ig E level”

\*\* Allergic rhinitis can be: Ig E mediated OR non Ig E mediated

Ig E mediated: There is an antigen-antibody reaction.

Non Ig E mediated: Like vasomotor rhinitis.

## WHO CLASSIFICATION OF ALLERGIC RHINITIS:



### ▪ Treatment:

- ✓ Avoidance of precipitating factors
- ✓ Antihistamine drugs “Mainstay of treatment specially if the patient has other allergies like Asthma, they are preferred in acute settings because of their rapid onset of action”
- ✓ Topical Steroid “preferred in the long-run and good stabilizers”
- ✓ Desensitization “immunotherapy”: used in case of failure of antihistamines and steroids. “now available in sublingual form”
- ✓ Surgery “not for the allergy itself but for other symptoms resulting from it e.g. Polyp, hypertrophied turbinate etc”
- ✓ **The same uniform classification of allergic rhinitis is proposed for:** Rhinitis, Conjunctivitis, Asthma, Eczema/dermatitis, Urticaria, Food hypersensitivity, Drug hypersensitivity, Venom hypersensitivity, Anaphylaxis

# Nasal polyp

- **Definition:** A pedunculated portion of oedematous mucosa of the nose.
- **Etiology:**
  - Allergy
  - Inflammation “i.e. Infections”
  - Neoplastic
- **Sites of origin:**
  - 1) Ethmoidal (**commonest sites**)
  - 2) Antral (antrochoanal polyps)



- **Individual polyp “unilateral”:** seen in
  - AFS “Allergic fungal sinusitis” in early stages
  - Antrochoanal polyp.
  - Inverting Papilloma
  - Encephaloceles
  - Gliomas, hemangiomas, juvenile nasopharyngeal angiofibromas, rhabdomyosarcoma, lymphoma, neuroblastoma, sarcoma, chordoma

➤ **Multiple polyps are usually found in:**

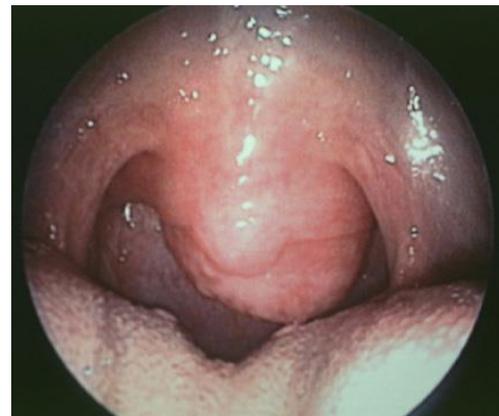
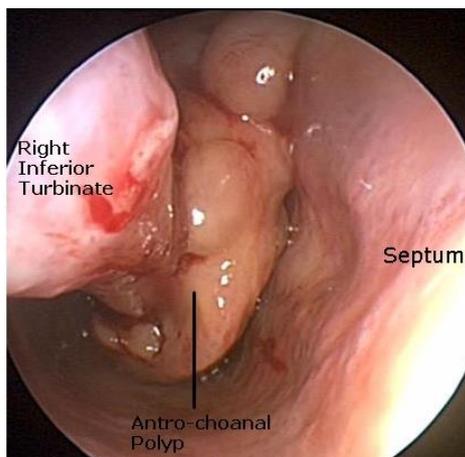
- **Chronic sinusitis\*** “we divide it into 2 types based on presence of polyps”
- **Allergic rhinitis\***
- **Cystic fibrosis (CF)\***
- **Allergic fungal sinusitis (AFS)\*\***

\*Usually bilateral involvement.

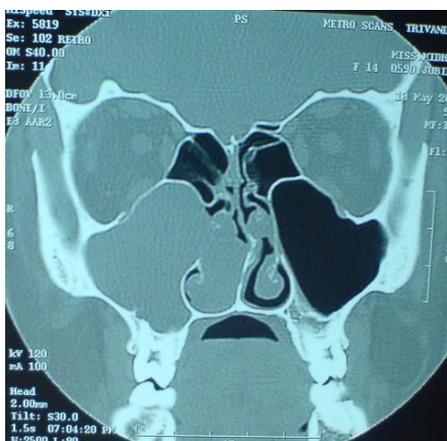
\*\* Usually start unilateral but in advanced cases it becomes bilateral.

➤ **Antrochoanal Polyp** “diagnosed on examination and imaging basis”

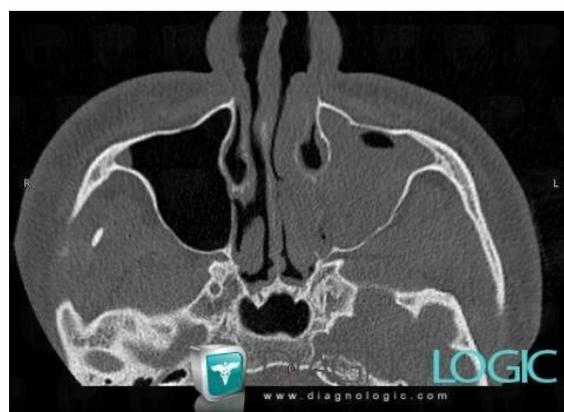
- Polyp originating in the maxillary sinus, protruding in the middle nasal meatus
- Further posterior extension moves the polyp through the choana into the nasopharynx, and a very large lesion may appear as an oropharyngeal mass.



Posterior extension to the nasopharynx



Coronal section CT scan showing unilateral mass in the maxillary sinus



CT scan showing unilateral mass in the maxillary sinus “axial”

### ➤ **Clinical features:**

- Nasal obstruction
- Sneezing, clear rhinorrhea
- Expansion of the nasal bones (frog face)

### ➤ **Treatment: “treat the underlying cause”**

- Antibiotic “if due to infection”
- Antihistamine “if due to allergy”
- Topical and systemic steroid therapy
- Surgical excision (FESS: functional endoscopic sinus surgery). “We have to aerate the sinus and drain so that functional physiology of the sinuses is restored”

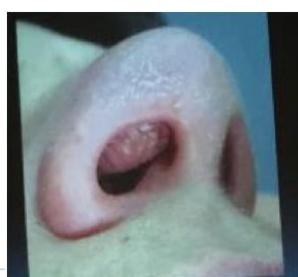
## Diseases of Nasal vestibules:

### ■ **Vestibulitis:**

- Vestibule is the most anterior part of the nasal cavity that is lined by skin epithelium “squamous epithelium” and has hair follicles.
- There will be pain, swelling, and other signs of local inflammation and sometimes fever.

### ■ **Furunculosis of nasal vestibulae:**

- **Definition:** Acute staphylococcal infection of hair follicle
- **Clinical features:** pain, tenderness, indurated swelling in the vestibulae.
- **Treatment:** systemic antibiotics or topical depends if the patient is immune-compromised or extreme of age.
- **Complication** cavernous sinus thrombosis (because the head& neck venous drainage system is VALAVELESS), cellulitis of upper lip.



**Nasal Vestibulitis**

**Furunculosis:** the same as vestibulitis, with pus.

**Vestibulitis:** more broad term than furunculosis, infection of skin and hair follicles.

**Cellulites:** skin infection without pus.

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